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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,198

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Dieter Groezinger

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EXAMINER

LIN, KUANG Y

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

04/06/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/591,198	<b>Applicant(s)</b> GROEZINGER, DIETER	
	<b>Examiner</b> Kuang Y. Lin	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1, 2 and 4-7, drawn to a water soluble salt core.

Group II, claim(s) 8, drawn to a method of forming a water soluble salt core.

2. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: For those groups of claims that SHARE a special technical feature, the special technical feature does NOT define a contribution over the prior art, i.e. the special technical feature is either anticipated by or obvious in view of the prior art. In the instant application, the special technical feature of water soluble salt cores containing inorganic phosphate is obvious in view of SU 1,196,096.

3. **Applicant is required to restrict the claims to the invention previously constructively elected, and thus claim 8 of Group II is withdrawn from further consideration by the Examiner under 37 CFR 1.142(b).**

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1, 2 and 4-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 6+, it recites "**the mixture** further comprising between approximately 1 and 10% by weight of parting agent comprising graphite". Since there

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are two kinds of mixture mentioned previously, it is not clear which mixture is referred to.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2 and 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over SU 1,196,096 and further in view of US 2,878,539 to Halpern et al.

SU '096 substantially shows the invention as claimed except that it does not disclose to make the compact pressure and use graphite parting agent.

However, it is conventional to use a compact molding machine or pressure blowing machine for pressuring the foundry mixture during core making process. Thus, it would have been obvious to use a compact molding machine or pressure blowing machine for forming core of SU '096 in view of the conventional practice. Further, Halpern et al. show that it is conventional to incorporate graphite as parting agent in the mold mixture to facilitate the foundry process. It would have been obvious to incorporate graphite in the mold mixture of SU '096 in view of the advantage. With respect to claim 2, it is conventional to add borate into phosphate binder for making foundry core (see, for example, US 5,573,055 to Melling et al.) With respect to claims 4 and 5, it is conventional to make the phosphate binder from aluminum phosphate, boron phosphate, etc. (see, for example, DE 10,065,075 or US 5,262,100 to Moore et al. (col. 7, line 32)).

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8. Claims 1, 2 and 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 3,764,575 to Anderko et al. and further in view of US 5,573,055 to Melling et al. and US 2,878,539 to Halpern et al.

Anderko substantially shows the invention as claimed except that it use resin, instead of phosphate, as a binder and does not disclose the use of graphite parting agent. However, Melling shows to use phosphate and/or borate as a binder to avoid the use of any organic materials which would volatize or burn out when the mold is heated at high temperatures (see, for example, col. 4, lines 4-7). It would have been obvious to use the phosphate and borate binder of Melling in the water soluble salt core of Anderko in view of the advantage. Further, Halpern et al. show that it is conventional to incorporate graphite as parting agent in the mold mixture to facilitate the foundry process. It would have been obvious to incorporate graphite in the mold mixture of Anderko et al. in view of the advantage. With respect to claims 4 and 5, it is conventional to make the phosphate binder from aluminum phosphate, boron phosphate, etc. (see, for example, DE 10,065,075 or US 5,262,100 to Moore et al. (col. 7, line 32)).

9. Applicant's arguments filed Feb. 17, 2009 have been fully considered but they are not persuasive.

a. Applicant in page 6, last para. of the response stated that SU '096 teaches away from the use of a parting agent since Halpem et al. use zinc stearate as a parting agent while SU '096 specifically notes that "Zn is also eliminated".

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However, Zn is different from zinc stearate. Also, SU '096 does not mention that Zn is used as a parting agent. Thus, applicant's argument is moot.

b. Applicant in page 7, 3<sup>rd</sup> para. of the response stated that Anderko et al. teaches that "it is an object of the invention to provide ---- [a core] ---- which can be produced without compression and sintering. Thus, applicant concluded that Anderko et al. teach away from the present applicant's process which includes compression and sintering. However, as phosphate binder of Melling et al. were used in the foundry composition of Anderko et al., the compression and sintering steps must be performed. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

c. As pointed out by applicant that because Anderko et al. utilizes synthetic resin as a binder, the cores in Anderko et al. must be subjected to outgassing. However, Melling et al. show an improved binder for forming a cores or molds which includes the use of phosphate and/or borate. As compared to the conventional binder, such as synthetic resin (see col. 1, lines 60+), the cores or molds with the improved binder of Melling et al. has the advantage of reducing corrosion or erosion (col. 2, lines 4+, col. 8, lines 57+, col. 7, line 13+), low gas evolution (see col. 7, lines 13+, and abstract of SU '096). Also, the compression and sintering is not required in process of Melling et al. for forming the cores or

mold. Thus, it would have been obvious to use the phosphate binder of Melling et al. in the composition of Anderkl et al. in view of the advantage.

d. Furthermore, it is noted that claims 1, 2 and 4-7 are in a product-by-process format. Even if the process of SU '096 or Anderko et al. does involve compression and sintering steps, the water soluble salt core of SU '096 or Anderko et al. appears to be the same or similar to that of prior art. See MPEP 2113.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuang Y. Lin whose telephone number is 571-272-1179. The examiner can normally be reached on Monday-Friday, 10:00-6:30,.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jessica L. Ward can be reached on 571-272-1223. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kuang Y. Lin/  
Primary Examiner, Art Unit 1793

3-31-09